



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,006	11/16/2001	Yasunori Uetani	2185-0590P	8026

2292 7590 12/10/2002

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

ASHTON, ROSEMARY E

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 12/10/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,006

Applicant(s)

UETANI ET AL.

Examiner

Rosemary E. Ashton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 6 should depend from claim 4 not claim 1 because claim 4 has the formulas disclosed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoshi et al, JP 2000-292917. An English translation (ET) of the document is provided from the Japanese Patent website. The examiner refers to the translation, as well as a partial verbal translation done at the USPTO.

As shown in the abstract of the ET Satoshi teaches a positive resist composition comprising a photoacid generator (PAG) mixture of a triphenylsulfonium PAG and a PAG meeting applicant's formula (I) in claim 1 when Q1-Q3 are all hydrogen atoms and Q4 is a fluoroalkyl group of 1 to 15 carbon atoms. Specific anions are nonafluoro-1-butanesulfonic acid and heptafluoro-1-octanesulfonic acid (see Chemical Abstract DN 133:315619) that meet the limitations of claim 3.

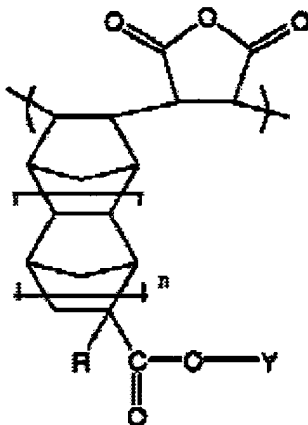
Art Unit: 1752

As shown in section 7 of the ET the composition comprises a polymer having a norbornene ester substituted with Y, as shown below, wherein Y is an acid dissociable group.

【0007】

【化5】

(II)



The acid dissociable groups for Y are listed in section 12 and consist of a limited number of groups such as 1-methyl-cyclohexyl, t-butyl, t-amyl, 1-ethyl-1-cyclohexyl, 2-methyl-2-adamantyl, tetrahydrofuranyl and 1-ethoxy ethyl. Thus, the teaching of 2-methyl-2-adamantyl anticipates applicant's claims 1 and 4 reading on a resin having 2-methyl-2-adamantyl group which is formula IIc in claim 4.

As to claim 2, based on a verbal translation of section 32, the patent states the amount of PAG (component B) is 0.1 to 20 % by weight of the resin (component A). When the value of 99.9 % in claim 2 is interpreted as 100 % section 32 reads on claim 2.

Art Unit: 1752

As to claims 5 and 6, based on a verbal translation of section 20, the patent states the amount of formula II in the polymer is 40 to 60 mol % which reads on the limitations of claims 5 and 6.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suwa et al U.S. patent no. 6,322,949 and Suwa et al U.S. patent no. 6,187,504 each teach a photoresist composition comprising a thiophenium PAG, however, the compound does not have a carbonyl methyl group between the phenyl ring and sulfonium ion as claimed.

Hedrick et al U.S. patent no. 5,919,596 teaches a photosensitive polycyanurate resist comprising a PAG having the cation structure claimed with a hexafluoroantimonate or hexafluorophosphate anion. The anion is not a sulfonate and the polymer does not have the claimed groups.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 308-2057. The examiner works a flexible work schedule and can normally be reached M-F between 10:00 am and 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1752

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.



Rosemary E. Ashton
Primary Examiner
Art Unit 1752

rea
December 4, 2002

ROSEMARY ASHTON
PRIMARY EXAMINER